OIL PRODUCTION FORECASTS ROLE IN THE PACE STUDY

CONFIDENTIAL UNTIL JULY 16, 2008

The following are some excerpts from the Pace final report. The oil production forecasts were done by a Pace petroleum engineer. The comments generally describe the need and procedures used for the oil production forecasts and some (but perhaps not all) of their limitations and uses in the study. All forecasts were based on the best information at that time in within the limited amount of time to complete the study. For further information, please refer to the **Williston Basin Oil Development Power Load Forecast Study, July 16, 2007.**

North Dakota regional (Regions 1, 2 and 3) level oil production forecasts were not included in the final report but only as an additional set of information for anyone that they might be of assistance to . Generally speaking, these forecasts would have a higher risk of being less accurate than the multi-state regional oil production forecasts used in the report because of the uncertainty of the Bakken play at the time of the study and the drilling plan uncertainty for smaller specific geographic areas. . It would also be advisable to update the oil production forecasts every year or two.

Pace Global developed an Integrated Power Forecast Model ("IPFM") to project annual electric power loads in the Williston Basin for the next 20 years in conjunction with oil field development. The IPFM is comprised of a set of Excel worksheets designed to forecast the level of drilling activity and to project annual oil production for the next 20 years. The IPFM converts oil field development projections into power demand based on a wide variety of input assumptions, including short-term development plans of producers, existing well data and oil price forecast. *(Not all of the producers were interviewed of course.)*

To forecast power requirements for the entire Williston Basin, the IPFM requires inputs for drilling rig counts, average well Estimated Ultimate Recovery (EUR), average well oil production profile, and power requirements for pumping oil and water from wells, EOR activities, gas processing, gas gathering and compression, and oil pipeline pumping.

Pace Global divided the Williston Basin into three regions, as shown in Exhibit 16, so results would be more easy to comprehend and useful to Basin Electric in the planning of transmission and distribution systems. Each of the three regions has its own set of assumptions and power load forecast.

This section of the report discusses issues associated with crude oil production in the Williston Basin, which include: Pace Global's crude oil production forecast and long-term oil price projections, and oil pipelines. Developing an understanding of these fundamentals is important to accurately forecasting power load in the Williston Basin, because oil production provides the majority of the revenue stream necessary for ongoing development (natural gas sales account for the remainder of the revenue generated but gas production was not part of this study). Exhibit 8 presents a comparison of annual oil production for the Low, Most-Likely, and High Scenarios.

Historical oil well production data was obtained from the state oil and gas databases by county for each of the three regions. From the historical oil production data, Pace Global developed an average Williston Basin oil production decline curve by averaging historical production decline curves of randomly selected wells from all three regions. The resulting production decline curve, shown in Exhibit 17 , was translated into a production profile giving the percent of the total EUR that is produced each year in the life of a well in order to forecast new incremental oil production.

The average new well EUR was assumed to be 300,000 bbl (approximately 10% OOIP) over a 30 year life. In order to forecast the decline of existing production, the average year in well life was calculated for each region. Existing 2006 production by region was then declined according to the average decline curve starting in the average year in well life of that region. New EOR production was forecasted by assuming an additional 10% of OOIP could be recovered using tertiary recovery methods and the number of wells was derived from estimates of planned EOR power requirements provided by industry, assuming 500 HP per well based on existing EOR experience in the Williston Basin. No future EOR projects were included in the load forecast beyond what is currently planned for the next seven years as it was determined that the uncertainty is too great to forecast with any accuracy. Total oil production was then forecasted by adding existing production, incremental production from new drilling, and incremental production from currently planned EOR activity. Total oil production was forecast for 20 years for each of the three regions and for each of the three scenarios: Low, Most-Likely, and High. ***Oil production, however, was not used as a driver in forecasting power loads. Therefore, it was only secondary to the studies objectives. However, it was used to get a rough assessment of pipeline capacity which would have an impact on Williston Basin oil development. Even with the planned pipeline expansions at the time of the study, Exhibit 13 demonstrates that the incremental capacity is not expected to provide sufficient pipeline takeaway capacity for the projected Williston Basin oil production. To get a better reading on the pipeline capacity would take a more in depth look than what was afforded in the time allotted for this study.***

Although the IPFM is designed to forecast the best educated estimate of future power load, there is significant risk and uncertainties associated with the pace and extend of oilfield development within the Williston Basin. Industry's development plans are fairly well defined for the next two to three years, however, beyond that the level of confidence in development projections is dramatically reduced. As such, there is considerable risk that development will proceed at a rate very different than what is currently anticipated. For example, the uncertain influence of the Bakken formation could impact the level and distribution of future drilling activity. Industry has a high level of confidence in further developing the Bakken play in the Elm Coulee Field in Region 2 and along the Nesson Anticline in Region 1. Outside of these areas, however, the potential performance of the Bakken formation is unpredictable and highly uncertain. In an environment of favorable conditions such as high sustained oil prices, discovery of successful completion technologies, new field discoveries, better than average EURs, and lower drilling and operating costs, there could be tremendous potential for future development of the Bakken play in the Williston Basin. Thus there is upside potential to the high case that has not been accounted for with the current inputs to the IPFM as it is too uncertain to speculate. If favorable conditions continue beyond the next few years, there is potential for significantly higher power load requirements. With this in mind, the IPFM was designed as a dynamic model whereby different development scenarios could be evaluated as inputs to the model change over time.

The counties included in the North Dakota Regions are as follows:

ND REGION 1 :

Bottineau
Burke
Divide
Mountrail
Renville
Williams

ND REGION 2:

McKenzie
Golden Valley
Billings
Stark
Dunn

ND REGION 3:

Bowman
Slope

	State	ND Region 1			ND Region 2			ND Region 3		
	County	Totals			Totals			Totals		
		Annual Oil Production (BBls)			Annual Oil Production (BBls)			Annual Oil Production (BBls)		
	Year	Most-Likely	Low	High	Most-Likely	Low	High	Most-Likely	Low	High
	1986	12,431,903			31,496,038			1,634,767		
	1987	12,166,050			27,710,998			1,367,233		
	1988	12,568,162			25,017,637			1,358,784		
	1989	13,216,747			21,756,144			1,307,796		
	1990	13,263,549			21,719,424			1,332,075		
	1991	12,200,861			21,597,895			1,322,031		
	1992	10,782,806			20,175,538			1,341,500		
	1993	9,864,179			19,254,449			1,292,222		
	1994	8,938,033			17,040,931			1,303,165		
	1995	8,682,913			18,312,141			1,995,700		
	1996	8,422,445			17,902,382			5,665,418		
	1997	8,255,414			19,941,650			7,371,293		
	1998	8,317,550			20,036,505			6,948,102		
	1999	7,862,972			19,749,922			5,037,643		
	2000	8,244,230			19,874,652			4,379,490		
	2001	8,847,089			18,329,359			4,344,805		
	2002	8,986,957			16,554,348			5,089,398		
	2003	8,446,467			15,164,406			5,636,398		
	2004	8,174,273			14,566,498			8,266,126		
	2005	7,859,422			14,132,795			13,546,730		
Actual	2006	8,511,520			13,964,841			17,302,652		
Projected	2007	12,461,226	12,027,907	12,677,886	16,696,072	16,488,555	16,799,830	19,505,290	19,331,203	19,679,378
	2008	15,498,359	14,317,852	16,088,613	18,607,386	17,834,524	18,890,058	20,739,276	19,440,395	21,213,547
	2009	18,013,319	15,410,276	19,314,840	19,612,205	17,696,503	20,546,779	21,409,153	19,354,594	22,280,844
	2010	20,219,626	15,900,382	22,487,578	20,005,920	17,238,230	21,525,027	21,553,591	19,111,667	23,249,803
	2011	22,262,235	15,973,130	25,701,915	19,876,239	16,745,255	22,158,951	21,572,222	18,771,900	24,238,785
	2012	24,164,645	15,902,276	28,946,590	19,322,001	16,063,999	22,405,850	20,726,057	18,149,563	24,837,618
	2013	25,808,446	15,960,441	32,083,085	18,467,511	15,568,063	22,501,972	19,982,769	17,692,631	25,383,028
	2014	27,223,985	16,047,366	35,122,388	17,848,427	15,156,398	22,638,713	19,377,779	17,290,964	25,986,648
	2015	28,494,465	16,160,991	38,137,037	17,380,203	14,806,843	22,806,662	18,904,247	16,951,077	26,505,863
	2016	29,666,621	16,303,140	40,730,060	17,017,273	14,513,715	22,992,384	18,517,409	16,655,156	26,973,716
	2017	30,750,551	16,451,758	43,023,459	16,715,991	14,252,281	23,182,179	18,188,462	16,380,859	27,395,284
	2018	31,752,121	16,590,510	45,088,735	16,449,968	13,999,889	23,361,181	17,882,700	16,114,627	27,769,246
	2019	32,673,530	16,711,449	46,967,374	16,197,917	13,752,615	23,519,944	17,595,191	15,855,338	28,101,061
	2020	33,521,962	16,812,007	48,688,168	15,954,832	13,507,893	23,656,285	17,315,270	15,599,314	28,395,289
	2021	34,335,720	16,924,027	50,308,993	15,737,611	13,288,848	23,793,459	17,058,636	15,365,666	28,675,002
	2022	35,100,539	17,031,069	51,822,855	15,531,066	13,080,161	23,919,065	16,810,768	15,133,192	28,929,730
	2023	35,815,720	17,126,477	53,240,615	15,330,402	12,871,922	24,032,323	16,569,591	14,904,340	29,159,201
	2024	36,510,537	17,233,881	54,597,982	15,154,127	12,684,048	24,151,281	16,351,140	14,695,687	29,384,554
	2025	37,196,041	17,357,223	55,909,801	15,005,182	12,519,374	24,282,077	16,158,480	14,502,453	29,611,778
	2026	37,873,348	17,489,904	57,182,449	14,876,511	12,366,145	24,422,212	15,980,803	14,317,291	29,836,308
	2027	38,539,745	17,625,513	58,419,053	14,759,335	12,218,162	24,566,396	15,814,723	14,138,392	30,057,291